-Water Conservation Plan Preparation-
A Guidance Document for Community Water Systems

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A community water system seeking approval for a new source of water must meet the requirements of New Hampshire Administrative Rule Env-Wq 2102, *Water Conservation.* Requirements vary depending on the type of water system as follows:

Env-Wq 2101.04 New Community Water System (Large & Small)
Env-Wq 2101.05 Existing Large Community Water System
Env-Wq 2101.06 Existing Small Community Water System

The rules require submittal of a water conservation plan demonstrating how the water system proposes to comply with the provisions of Env-Wq 2101. The purpose of this document is to provide guidance on the information that should be included with the water conservation plan to ensure that it is administratively complete and not returned for additional information.

It should be noted that some items are not explicitly required by rule. However, these items assist DES and the water system with understanding the tools that may be most effective at meeting water efficiency goals. In addition, many of the questions are only applicable to existing water systems and are intended to gauge how water efficiency has been implemented in the past.

Introduction

System Overview

- Reason for new source
- Number of connections for each of the following classes
  - Residential
  - Industrial/commercial/institutional
  - Municipal
- Description of any connections that receive more than 20,000 gpd.
- Water use trends with supporting data
  - Maximum day yield of existing sources based on 24-hour pumping
  - Average daily water use
  - Maximum daily water use
  - Seasonal trends in water use
  - Minimum hourly flows (if available)
- Population trends
  - Seasonal fluctuation
  - Anticipated growth

System Side Management

Source Meters

- Name designation of each water source

  - Meter make, model, size, and flow range for each source
  - Last meter test date (if already installed) for each source
- Frequency that source meters will be tested
- Frequency that source meters will be read (at least every 30 days)
- Statement that source meters will be selected, installed, and maintained in compliance with "Manual of Water Supply Practices, Water Meters-Selection, Installation, Testing, and Maintenance," document identification number AWWA M6, American Water Works Association, 1999.

Service Meters

- Breakdown of unmetered connections for each of the following customer classes
  - Residential
  - Industrial/commercial/institutional
  - Municipal
- Proposed timeframe for installing meters on unmetered connections (within three years for existing systems)
- Proposed rate of testing/ change out by customer class (or distinguish by meter size)
  - Residential and municipal service meters
  - Industrial/commercial/institutional meters
- Frequency that service meters will be read (at least every 90 days)
- Description of all methods used to read service meters
- Statement that service meters will be selected, installed, and maintained in accordance with "Manual of Water Supply Practices, Water Meters-Selection, Installation, Testing, and Maintenance," document identification number AWWA M6, American Water Works Association, 1999. The report must reflect the recommendations of this manual.

Estimating Unaccounted for water (non-revenue water)

- Most recent estimate of unaccounted for water and the year it was estimated
- Frequency that unaccounted for water will be estimated (at least annually)
- Statement that the water system shall prepare and submit a response plan to the department within 60 days if the percentage of unaccounted for water in the water system exceeds 15 percent of the total water introduced to the water system. The response plan shall identify how the water system intends to reduce the percentage of unaccounted-for water to below 15 percent within two years.

Water Audit

- Most recent water audit differentiating between apparent and real losses
- Frequency that water audit will be conducted
- Statement that water audit will be calculated in accordance with "Manual of Water Supply Practices, Water Audits and Leak Detection" document identification number AWWA M36, American Water Works Association, 1999. Please see http://www.awwa.org/Resources/WaterLossControl.cfm?ItemNumber=47846&navItemNumber=48155 for additional guidance.

Leak detection

- Summary of findings for the most recent leak detection surveys
  - Year(s) conducted

  - Number of leaks found
  - Estimated losses recovered
  - Percent of system surveyed
- Is it anticipated that future surveys will be conducted in-house or contracted out?
  - If in-house, what equipment is available and what training has been acquired?
- Summary of distribution system
  - Are pipe locations known?
  - Breakdown of pipe material, age, and length
  - Availability of contact points and adequacy of spacing
- Description of leak detection method (if in house)
- Percent of distribution system to be covered each year
- Will zone meters be installed to assist with leak detection identification and location?
- Statement that leaks will be repaired within 60 days of discovery unless a waiver is obtained in accordance with Env-Wq 2101.09
- Statement that leak detection will be conducted in accordance with "Manual of Water Supply Practices, Water Audits and Leak Detection" document identification number AWWA M36, American Water Works Association, 1999.

Pressure Management

- Existing minimum distribution pressure
- Existing maximum distribution pressure
- Plan and timeframe to reduce pressures in zones in excess of 80 psi (when feasible)
  - If pressure reduction is not feasible, what additional steps will the water system take to monitor and repair leakage within these zones?

Intentional Water Loss

- Are there "bleeders" used within the system at dead ends to improve water quality or prevent freeze-up?
  - If yes, what looping opportunities exist?
- Are storage tanks intentionally allowed to overflow because of system hydraulics or water quality concerns?
  - If yes, what opportunities exist for the installation of altitude valves or tank mixing systems?

Consumption Side Management

Conservation Rate Structure

- Description of existing rate structure
- Plan and timeframe to adopt rate structure in accordance with Env-Wq 2101 (within 5 years for existing systems)
- Current and proposed billing frequency
- Will separate irrigation meters be installed?
- Will a seasonal rate structure be utilized in addition to the general rate structure?

Educational Outreach Initiative

- Materials that will be used
- Rate of dissemination

General Statements:
"The water system will submit a form supplied by DES once every three years documenting how compliance with the requirements of Env-Wq 2101 is being achieved."

"Activities outlined in the water conservation plan will be completed by water system personnel under the supervision of a certified water system operator."

Public Notification
Within seven days of submitting the report the applicant shall provide a copy of the application and report **via certified mail** to the governing board of the municipality in which a proposed source is located, all municipalities that will receive water from the water system (if any), all wholesale customers (if any), and the regional planning commission serving the location of the proposed source. In most cases only the municipality and the regional planning commission will require notification. The notified entities may provide the department with written comments regarding the application within 21 days of receipt. The applicant must provide the governing boards with a summary of the requirements of Env-Wq 2101 and request that the governing board amend local site planning requirements to reflect the requirements of Env-Wq 2101 or to promote water efficiency.

Other Voluntary Measures

Other Outreach Measures
- Does the water system intend on becoming a WaterSense http://www.epa.gov/watersense/ partner?
- Will customer audits be offered?
- Will a rebate program be offered to replace older fixtures
- Other outreach plans?

Zoning Ordinance / Bylaws
- Are connections to the water system subject to any of the following water efficiency ordinances or bylaws?
  - Indoor
    - Water efficient fixtures beyond the existing plumbing code
  - Landscaping
    - Minimum topsoil requirements
    - Use of native/drought tolerant plants and grasses
    - Area and slope restrictions for turf grass
  - Irrigation System
    - Prohibition or restrictions to irrigation systems
    - Require soil moisture sensors
    - Require rain sensors
  - Other water efficiency ordinances?

Water Use Restrictions
- What is the water system's plan relative to implementing water restrictions?
- Who is responsible for enforcing restrictions?